

A New Economic Platform: The Nuclear-Thermonuclear NAWAPA XXI

Man is profoundly distinguished from the other organisms by his action on the environment. This distinction, which was great from the beginning, has become immense with the passage of time. . . .

Reason changes all. Through it, man utilizes material in the environment—inanimate or living—not only for the building of his body, but also for social life. And this usage has become a great geological force.

Thought, by its existence, introduces into the crustal mechanisms a powerful process having no analog before the appearance of man.

— Vladimir Vernadsky, “Human Autotrophy”¹

The Context

This planet can no longer tolerate environmentalists.

The time has come to make a tremendous step forward in our relationship to nature, by making the development of a fusion-based economy—bringing the power of the stars under our control—our primary long-term physical economic goal. Not a goal to be pursued in isolation, the mental outlook coherent with such an objective demands immediate action on both political and physical-economic fronts.

A new international order must be secured, based not on maintaining hegemony in a static world, but on scientific and technological cooperation for the benefit of all nations.

The failing and flailing trans-Atlantic financial system will take down the physical economies of the world with it, unless a break is made. That break is Glass-Steagall, which would restore national sovereignty by breaking the hold of Wall Street, the City of London, and kindred interests over policy-making. With Glass-Steagall in place, the primary financial obstacle to progress will be removed, and future-oriented projects can be funded.

Foremost among these must be an updated North American Water and Power Alliance (NAWAPA XXI), a civil works project of truly geological magnitude. This program would redirect water from river basins in Can-

ada and Alaska to the parched regions of the continent, providing a secure water supply that will triple the acreage of irrigable farmland in the Southwest. Its construction will involve some of the first civilian use of nuclear technology for purposes other than electricity. By providing a drought- and flood-resistant, stable water supply, and improving the atmospheric moisture system of North America, NAWAPA XXI is essential for the continued survival and flourishing of human life on our continent.

With both monetarism and radical (anti-human) environmentalism out of the picture, we can make the next leap in our power: the development of a new form of *fire*.

Fire, the fabled gift of Prometheus to man, separates, absolutely, the human species from all others. From its initial form as wood fire for heat and cooking, fire progressed to charcoal to allow basic metalworking, then to coal and coke to further expand the materials available to us and allow steam-engines to replace muscle-power. Petroleum fire enabled the internal combustion engine. Electrical “fire” transmits our power to act by metal wire to motors, rather than by railcars of coal and large steam engines, and allows entirely new fields of materials, such as aluminum.

But this natural process has been halted. Nuclear fission, a qualitatively new form of fire, saw its application stunted, and its only commercial applications in electricity and some limited use of medical isotopes. Fusion, currently languishing from chronic underfunding, will set us free from limited energy and limited resources, enable us to control errant asteroids, and bring the outer planets and stars within our reach; but this breakthrough is being prevented.

The economic *platform* encompassing fusion power and our mastery, through NAWAPA XXI, of the very geology of our planet—our river systems and our weather—is a coherent goal, one that binds together our greatest aspirations.

While breakthroughs in fusion (given adequate funding) have been possible for decades now, the present historical context does not present fusion as an option, but rather as a necessity.

Any civilization which systemically rejects man’s natural development as an increasingly powerful force in nature, will simply be unable to exist.

1. Vernadsky, VI., “Human Autotrophy”, 1925, full translation to appear in the Fall 2013 issue of *21st Century Science and Technology*.

This Report

The report lays out the new economy to be developed with a nuclear NAWAPA XXI driving towards a fusion economy as its driver. We begin with fusion, covering the current state of fusion research and nuclear applications besides electricity, such as peaceful nuclear explosions for earth-moving, and the ultimate in resource extraction: the plasma torch, which can break up any material into its elemental components. These technologies are within reach: the past few decades have seen a 10,000-fold increase in a key fusion parameter, which requires only another 10-fold increase to achieve controlled fusion. Appendices expand on the concept of energy flux density and breakthroughs to be made in the field of high energy-density physics.

The next article introduces the North American water cycle, the current water challenges we face, and how nuclear power will transform the NAWAPA XXI system. Water which currently plays no role in the biosphere or human economy will become more productive, and thus more valuable. And by making use of the evapotranspirative multiplier provided by plant life, every unit of water introduced by the system will have a greater effect. This project can change the fundamental character of the climate of the Western states.

With an understanding of the continent's hydrology, we then jump into the implementation of solutions: desalination and NAWAPA XXI. During the decades required to bring the full system online, immediate mass-production of nuclear desalination plants can provide immediate relief and water security to coastal areas as well as inland areas suffering from saline intrusion.

Nuclear agro-industrial complexes, which demonstrate many of the non-electrical uses of nuclear processes, are taken up next. A past breakthrough, coal, provided more than an improvement over wood for home heating, by allowing for new metallurgical processes as well. So too will economic planning incorporating nuclear complexes make use of the high-temperature process heat and unique isotopes of nuclear power.

We conclude with a proposed Pacific Development Corridor, based on high energy-density development, including high-speed

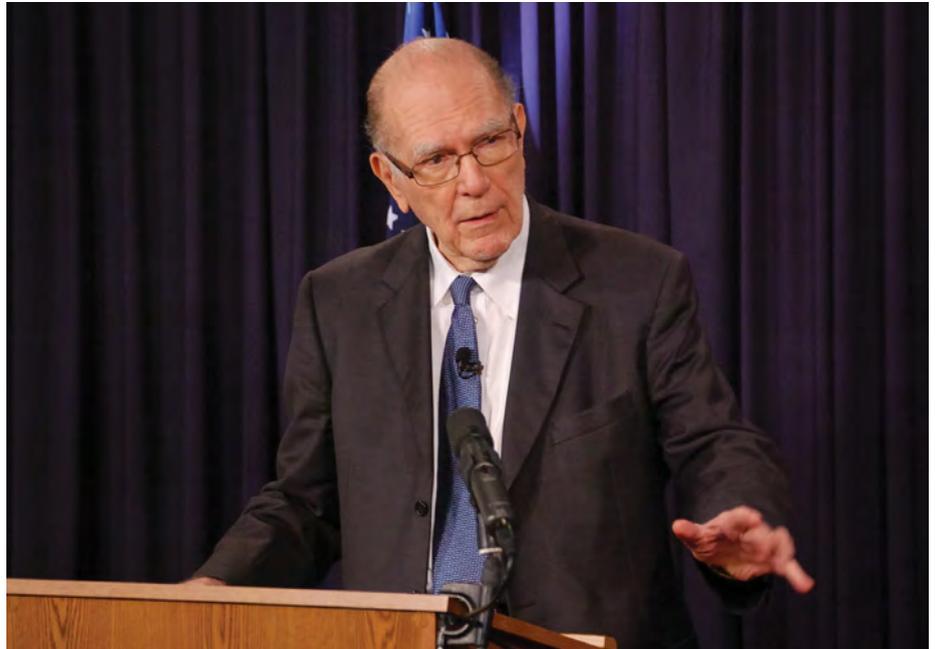
magnetic levitation transportation. Rather than pursuing a military and economic encirclement of Russia and China, this concept is an example of what international relations should be.

Be Fruitful!

This report provides a full basis for scientists and policy-makers to conceptualize the inspiring future that can be ours, if we grasp it. Doing so will, of course, require some financial housekeeping, including the immediate re-implementation of Glass-Steagall, to free our physical economy from the political (rather than economic) control by money. This proposal is fiercely opposed by the same groupings that have held back fusion, fostered the cult-like environmentalist movement, and who teach our children that their goal in life is to have as little impact on their surroundings as possible. This is a goal of extinction!

We are past the point of being able to tolerate this pathological anti-human outlook. Let us now overthrow the stasis demanded by these forces, and be beautifully human, enjoying the thrill of discovery as we do things that are truly new!

Jason Ross
Editor in Chief



A member of 21st Century Science and Technology's Scientific Advisory Board, economist Lyndon LaRouche has been a strong advocate of fusion power throughout his career. His proposal for revisiting NAWAPA from the standpoint of a fusion economic platform provided the inspiration for this Special Report.